9.3.2 WASTE COMPATIBILITY

This step ensures that the containers, tanks, liners, and appurtenant equipment that come into contact with wastes are made of materials that are compatible with the wastes of concern. It is also the purpose of this section to identify incompatible wastes or materials which are or might be used by the owner or operator so that measures can be taken to prevent the mixing of these wastes/materials.

The specific outputs necessary to complete this step are (1) assessment of the compatibility of all wastes handled at the facility, (2) assessment of the compatibility of the waste handled at the facility with the containers, tanks and equipment used, and (3) the completion of the Waste Compatibility Checklist.

KEY QUESTIONS

Has it been demonstrated through laboratory testing that each waste handled is compatible with its respective container or processing equipment?

On a waste-by-waste basis, what would happen if the waste was not compatible with the container or processing equipment used--leakage, fire, explosion, etc.?

Which wastes are most damaging to equipment seals, gaskets, high pressure hoses, and other system potential weak points?

Considering all wastes handled by the facility, what would happen if various waste combinations were mixed together--say during a major earthquake or fire, and what steps are being implemented by the facility operator to prevent such mixing?

What are the qualifications of the person making this evaluation?

REQUIRED OUTPUTS

Assessment of the compatibility of all wastes handled at the facility.

Assessment of the compatibility of the waste with containers, tanks and other equipment handled at the facility.

APPLICABLE REGULATIONS AND STATUTES

State Laws and Regulations:

Cal. Code of Regs., Tit. 22

66270.15(c)	Required description of procedures for incompatible waste storage in containers
66270.16(j)	Required description of procedures for incompatible waste transfer, storage or treatment in tanks
66264.17	General Requirements for Ignitable, Reactive, or Incompatible Waste
66264.172	Compatibility of Waste with Containers
66264.177	Special Requirements for Incompatible Wastes
66264.192(b)	Required compatibility with waste(s) to be transferred, stored, or treated
66264.198	Special Requirements for Ignitable or Reactive Waste
66264.199	Special Requirements for Incompatible Wastes

Chapter 14
Appendix V Examples of Potentially Incompatible Waste

Cal. Code of Regs., Tit. 23
Subchapter 16 Underground Tanks

Federal Laws and Regulations:

Other Laws and Regulations:

Local zoning laws may prohibit storage or treatment of particularly flammable or reactive wastes.

POLICIES

DTSC Policies:

If available, the applicant should provide the permit writer with either the manufacture's literature or published literature which demonstrates compatibility between wastes, materials, and equipment.

EPA Policies:

Other Policies:

INSTRUCTIONS TO APPLICANTS

Handouts to be Given to Applicants:

Examples to be Given to Applicants:

CEQA CONSIDERATIONS

LEGAL CONSIDERATIONS

INTERAGENCY AGREEMENTS & MOUs

COORDINATION WITH OTHERS

Other DTSC Units:

Environmental/Legislative/Industry Groups:

Other Agencies:

Special Requests:

STEP-BY-STEP PROCEDURES

Flow Charts:

Checklists:

TECHNICAL REFERENCES

A Guide for Estimating the Incompatibility of Selected Hazardous Waste Based on Chemical Mixtures, March 1986 (ASTI Designation P-161. NOTE: This is primarily a reprint of Howard Hatayama, et al., "A Method for Determining Hazardous Waste Compatibility ", U.S. EPA, Cincinnati, 1980).

Compatibility of Waste in Hazardous Waste Management Facilities, U.S. EPA, 1982.

Technical Resources Document for the Storage and Treatment of Hazardous Wastes in Tank Systems (Chapter 13, Incompatible Wastes) (Office of Solid Waste Document No. EPA/530-SW-86-004).

Permit Applicant Guidance Manual for the General Facility Standards of 40 CFR 264, October 1983 (Chapter 5, Guidance for Permit Application Preparation).

Flammable and Combustible Liquids Code #30 (1984); National Fire Protection Association.

The Chemical Engineer's Handbook, Fifth Edition, Perry. (Corrosion tables of metals in contact with various chemicals, and heats of reaction from mixing of chemicals.)

SAX - Properties of Industrial Chemicals
Hazard properties of each of the waste chemicals to be stored or treated in the waste units.

Region 2 corrosion engineer's report dealing with the failure of a stainless steel truck tank when filled with hydrochloric and nitric acids.

EXAMPLES OF COMPLETED WORK PRODUCTS

TIMELINE AND PLANNING

Permit Processing Chart:

Workload Standards:

Statutory & Other Deadlines:

WP File Name: 2/CH0932_P.MAN

WP File Name of Checklist: 5/CK0932_P.MAN

List of Examples:

List of Attachments:

List of References:

A Guide for Estimating the Incompatibility of Selected Hazardous Waste Based on Chemical Mixtures, March 1986 (ASTI Designation P-161. NOTE: This is primarily a reprint of Howard Hatayama, et al., "A Method for Determining Hazardous Waste Compatibility, U.S. EPA, Cincinnati, 1980).

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